Amendments to the Specification:

Please replace the title of the application on page 1 with the following amended title:

A METHOD OF DECREASING THE GROWTH RATE OF WILD-TYPE ~~NON-VIRULENT~~ *PORPHYROMONAS GINGIVALIS* ~~MUTANT~~

Please replace the last paragraph beginning on page 11, lines 18-27 through page 12, lines 1-4, with the following amended paragraph:

First, total RNA was isolated using the ~~Qiagen Rneasy~~ QIAGEN® RNeasy Kit (Qiagen, Valencia, CA) from the wild-type W83 strain and from the FLL32 and FLL33 mutants grown to mid-log phase (OD_{600} of 0.2). Unique oligonucleotide primers for *prtP* (as disclosed in Barkocy-Gallagher, G.A. et al., "Analysis of the *prt*P gene encoding porphypain, a cysteine proteinase of *Porphyromonas gingivalis*." *J.Bacteriol. 178*, 2734-2741, 1996), *prpRI* (Aduse Opoku, J. et al., "Characterization, genetic analysis, and expression of a protease antigen (PrpRI) of *Porphyromonas gingivalis* W50." *Infect.Immun. 63*, 4744-4754, 1995) and *prtRII* were used in RT-PCR to amplify a 1 kb region of the transcripts. Amplified products of the predicted 1 kb size were observed for all three protease gene transcripts in all three strains (data not shown). Further, there were no observed differences seen in the concentration of the amplified product between the genes of the three strains. Therefore, both FLL32 and FLL33 strains produce the same mRNA transcripts for the major protease genes in the same amounts as the wild-type W83. As a control, *recA* intragenic primers amplified the expected 0.72 kb region only in the wild-type W83 strain.

Please replace the second paragraph beginning on page 12, lines 5-13, with the following amended paragraph:

The presence of the mRNA transcripts for the *prpRI* and *prtP* proteases in all three *P. gingivalis* strains were further confirmed in Northern blot analysis using an amplified intragenic region of each gene as a probe. Total RNA was extracted from each of the W83,

FLL32 and FLL33 strains grown to mid-log phase (OD_{600} of 0.2) using the ~~Qiagen Rneasy~~ QIAGEN® RNeasy midi kit (available from Qiagen, Valencia, CA, according to the manufacturer's instructions). RNA samples of 1 μg were then separated by agarose gel electrophoresis and transferred to nitrocellulose filter according to the method of Sambrook et al. (Sambrook, J., Fritsch, E.F., and Maniatis, T. (1989). Molecular Cloning: A Laboratory Manual. Second edition. (Cold Spring Harbor, NY: Cold Spring Harbor Laboratory Press)).